Wharfedale Pro

EZ-m mini-mixer 16x2

OWNER'S MANUAL

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Introduction

Thank you for purchasing a Wharfedale Pro **EZ-m mini-mixer**. The Wharfedale Pro **EZ-m** Series mixers are designed for ease of use and quality audio performance. Please read this manual completely to ensure proper understanding of the features and operation of your mixer.

FEATURES

EZ-m 16x2

- 2 Mono balanced / unbalanced mic / line input channels with 2 Band equalization.
- Variable input **GAIN** controls on mic/line channels
- **CLIP** LED's on mic/line channels
- 4 Stereo channels with balanced / unbalanced ¼" Tip-Ring Sleeve (TRS) jacks.
- "2 Track" stereo inputs and outputs with 1/8" stereo and dual RCA jacks
- "2 Track" assignable (**2TK TO MAINS**, **2TK TO PHONES**) switches with level control.
- Separate **MAIN MIX**, and **PHONES** outputs with level controls
- 4 segment, stereo bar-graph LED meters
- Convenient 1/8" stereo jacks for **2TK IN**, **2TK OUT** and **PHONES**

Important Safety & Warranty Information

1. Power Supply

This **EZ-m** Series mini-mixer is supplied with an external power supply unit. Use only the power supply provided with your mixer. Use of any other power supply could cause damage to the mixer and other equipment. Connect the power supply to the mixer BEFORE connecting it to the power source outlet. Be sure to allow for free airflow around the mixer, as it may become warm during long periods of operation. The mixer is shipped with the correct power supply for the country in which it is to be used. This can be verified by checking the label on the power supply.

2. Packing

The exterior and interior packaging has been designed protect the mixer during transit.
If any shipping damage has occurred, consult your dealer and the shipping provider.

3. Safety

Avoid exposing your **EZ-m** Series mixer to excessive heat, humidity and dust. Store and operate the mixer away from locations where it is likely to be exposed to these conditions. Also, avoid placing your **EZ-m** Series mixer in locations which may be subject to excessive vibration/physical shocks that could cause mechanical damage to the mixer.

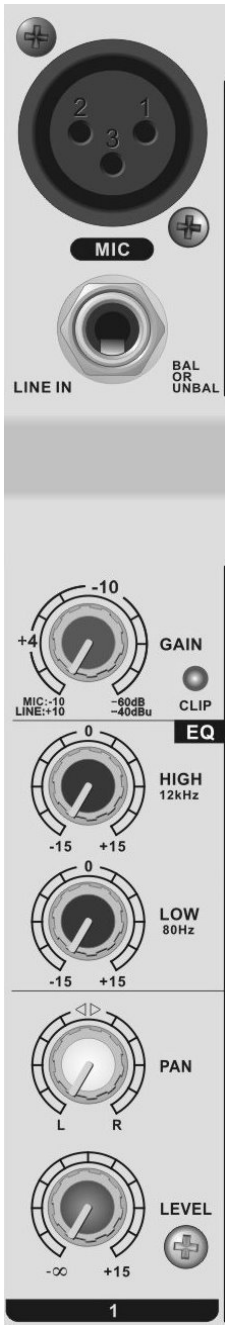
WARNING: REFER ALL MAINTENANCE, REPAIRS AND MODIFICATIONS TO QUALIFIED SERVICE PERSONNEL! THIS PRODUCT CONTAINS NO USER-SERVICEABLE PARTS!
For the protection of the mixer and other audio equipment, always turn off the power on the mixer and other system components before connecting or disconnecting audio cables. Be aware that excessive volume levels are possible from the output of this mixer. Protect your hearing accordingly.

4. WARRANTY

The EZ-m Series mixers are covered by a limited warranty, against any defects in workmanship for a period of one year from the date of purchase. This warranty is non-transferable and applies only to the original purchaser. If any warranty related issues occur, contact your dealer. Proof of purchase may be required.

DETAILED FEATURES OF THE EZ-m 16x2

Mono Mic / Line Input Channel



① Low Impedance (Low Z) MIC Input

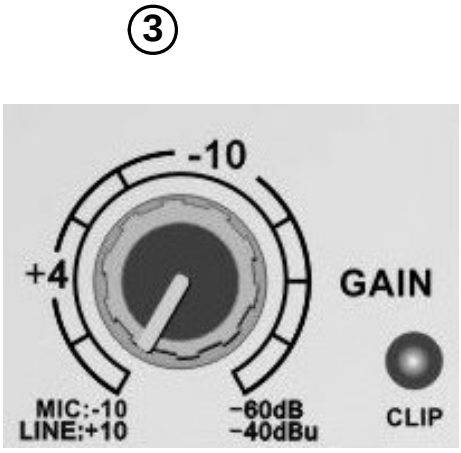
The low noise, high headroom “Low Z” **MIC** inputs are for use with balanced, low impedance dynamic microphones. **NOTE: Condenser microphones will not work on this mixer.**

② LINE IN

These ¼” Tip, Ring, Sleeve (TRS) jacks are designed to be connected with (-10 to +4dBu) balanced or unbalanced line level sources.

③ **GAIN** Control

In order to achieve the best signal to noise ratio and adequate dynamic range, the input preamp level of the Mic/Line channel is adjusted with a **GAIN** control on each mono channel. Set the **GAIN** control by watching the LED bar-graph meters—above the **MAIN MIX** level control in the Master section of the mixer—while the signal source for that channel is active (whether it be a microphone or an instrument connected to the **LINE IN** of the channel). The ideal level is between 0dB and +6dB on the bar graph meters.
If the CLIP LED on the channel lights up consistently, the **GAIN** control is set too high. It is acceptable for the **CLIP** LED to flash periodically especially with loud instruments like drums or during peak sound levels during loud portions of a performance.



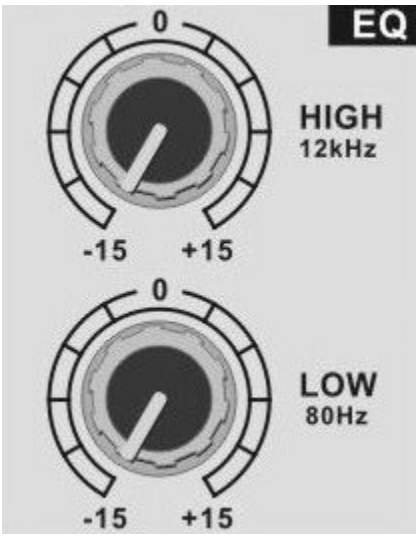
④ **CLIP** LED

The **CLIP** LEDs (on channel 1) will light up when the input signal is driven too high. This indicates that the signal is overloading the preamp and causing distortion.

⑤ EQ Section

Channels 1 and 2 each feature a two band Equalization ("**EQ**") section. Each band is chosen from the prime frequencies for most musical applications, and allows up to 15 decibels of boost (increase) or cut (decrease) of the signal in the tone range for which it controls. In the center-detent position (**0**), the equalizer is bypassed (flat)and the control has no effect on the tonal characteristics of the signal. The **HIGH *EQ*** control is centered at **12kHz** and the **LOW *EQ*** control is centered at **80Hz**.

⑤



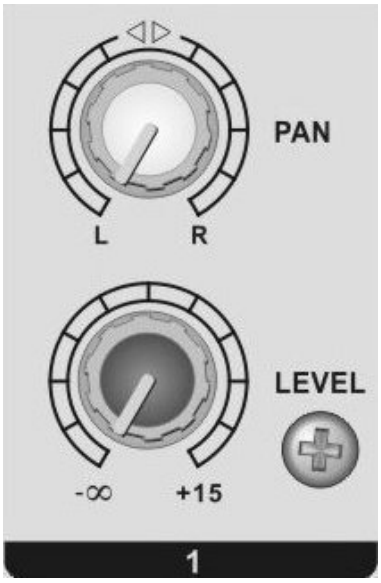
Pan and Level

⑥ **Pan Control:** On Channels 1 & 2, the **PAN** control adjusts the left/right balance of the mono signal being sent to the left and right **MAIN MIX** outputs.

⑦ The Channel 1 LEVEL Control

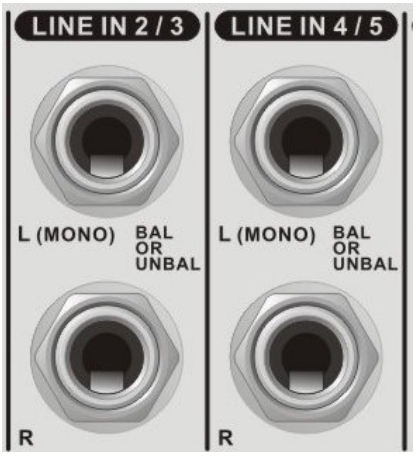
The Channel 1 **LEVEL** knob allows for control of the level of the signal that is being sent to the **MAIN MIX** master volume control. Adjust each channel level control to acquire the best "mix" ,or balance of signals, from each input.

⑥



⑦

Stereo Channel Inputs



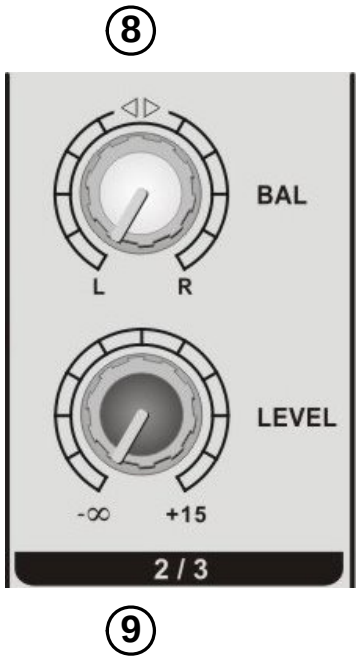
Each of the stereo channels on the **EZ-m 16x2** (**3/4, 5/6, 7/8, 9/10**) feature two line level inputs with ¼" Tip/Ring/Sleeve (TRS) jacks for both balanced and unbalanced left and right input signals. These inputs can accommodate both stereo and mono inputs. When using a mono source, connect the cable to the **LEFT (MONO)** input only. Stereo Channels 3 /4, 5/6, 7/8, and 9/10 have stereo Inputs with left and right ¼" Tip/Ring/Sleeve (TRS) input jacks.

LEFT (MONO) input: When only one plug is inserted into the LEFT jack, the channel operates as a mono channel.

BALANCE and LEVEL

⑧ BALANCE Control

On a stereo channel, with a stereo input connected, turning the **BALANCE** control to the left will cause right input's signal level to decrease. Turning the **BALANCE** control fully right on a stereo channel will cause the left input's signal level to decrease. If a mono input is connected to a stereo channel, the **BALANCE** control will function as a **PAN** control by adjusting the left/right balance of the mono signal being sent to the left and right **MAIN MIX** outputs.

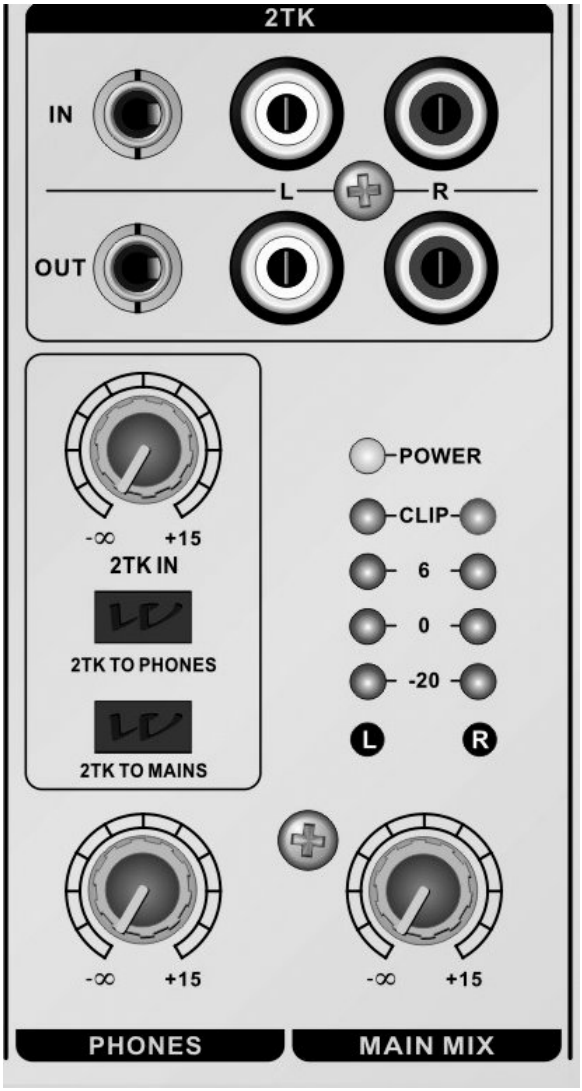


⑨ Stereo Channel Level Control

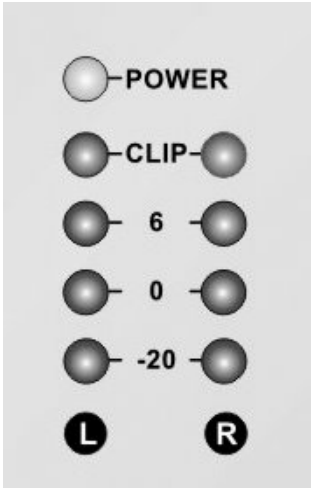
The stereo channel level control knob allows for volume control of both the left and right signals being sent to the **MAIN MIX** master volume control. If a mono input is connected to a stereo channel, the channel functions like a mono channel.

Master Section

The master section on the right side of the mixer controls the final gain stage of the mixed signals from the input channels. The **MAIN MIX** control allows for the adjustment of the overall output level of the **EZ-m** mixer.



POWER LED & Signal Metering



10 **POWER LED**

This amber LED lights indicating power is on for the mixer.

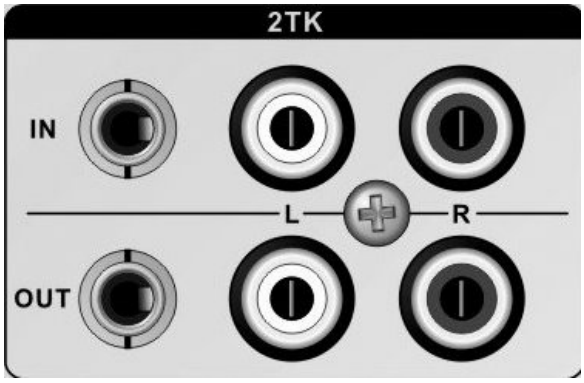
11 **Level Meters**

The signal level of the **MAIN MIX** output is displayed on the 4 segment LED bar-graph meters. Levels shown are **-20**, **0**, **6** and **CLIP**.

(12) 2TK IN

This section consists of two sets of three input jacks. The top row of jacks are the "**2TK IN**" jacks which are a 1/8" stereo jack and a left and right RCA jack. These inputs allow for the introduction of an external stereo signal to the mixer. This signal is controlled by the **2TK IN** volume control and the **2TK TO PHONES** switch as well as the **2TK TO MAINS** switch. When the 1/8" **2TK IN** jack is used, it takes priority over the RCA **2TK IN** jacks.

(12)

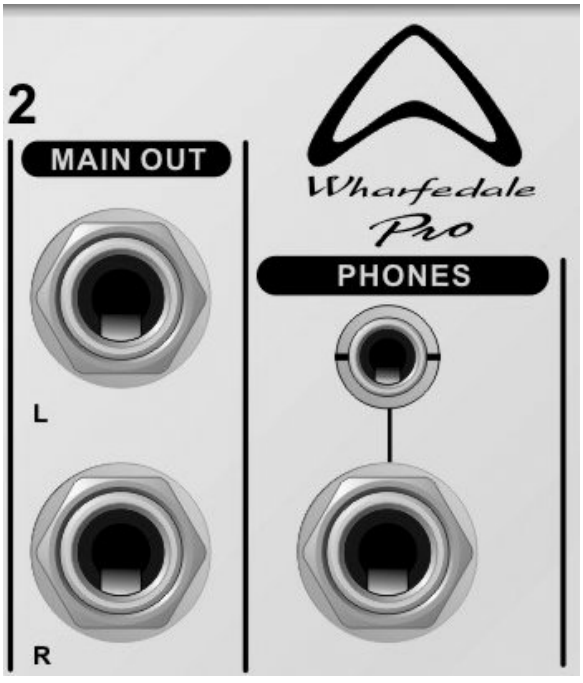


(13) 2TK OUT

This section also consists of two sets of three output jacks. These are the bottom row of jacks in the "**2TK OUT**" section featuring a 1/8" stereo jack, and left and right RCA jacks. These outputs allow for the routing of **MAIN MIX** stereo signal out of the mixer. This signal level is controlled by the **MAIN MIX** volume control. When the 1/8" **2TK OUT** jack is used, it takes priority over the RCA **2TK OUT** jacks.

(13)

(14)



(14) MAIN OUT ¼" L/R Outputs

Left and Right balanced, TRS (Tip, Ring, Sleeve) ¼" output jacks for connection to amplifier inputs or recording device inputs.

(15) Phones

This is a standard ¼" Tip-Ring-Sleeve (TRS) amplified stereo headphone output jack. A parallel connection to a convenient 1/8" mini stereo headphone jack is also included, allowing for portable headphones and ear buds. Volume is set with the **PHONES** level control. Be aware that very high volume levels are possible from this output. Make sure the level is set all the way down before connecting headphones.

(15)

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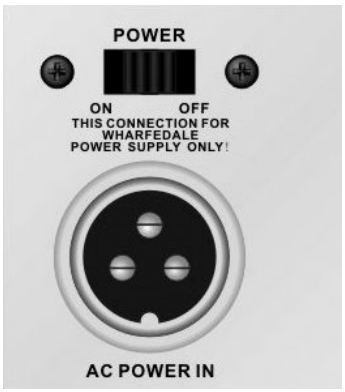

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16 POWER Switch – On/Off

This slide switch turns the unit on and off.

Always power down the **EZ-m** when it is not in use.

Be sure to turn off all system amplifiers or powered speakers before turning off the mixer.

17 AC Power Cable Connector

The included power adaptor connects here. Use only the power adaptor supplied with the mixer

CONNECTION WIRING DETAILS

MIC Inputs (Microphone)

The microphone (**MIC**) jack is a female XLR connector wired balanced with:

Pin 1 = ground, Pin 2 = hot (+) and Pin 3 = cold (-).

Line Inputs

The mono and stereo **LINE** inputs are wired with ¼" Tip Ring Sleeve jacks, wired balanced with:

¼" - Tip = hot (+), Ring = cold (-), Sleeve = ground, although standard ¼" unbalanced phone plugs can also be used, wired Tip = hot (+), Sleeve = ground.

MAIN MIX Outputs

The **MAIN MIX** outputs are wired with ¼" Tip Ring Sleeve jacks, wired balanced with:

¼" - Tip = hot (+), Ring = cold (-), Sleeve = ground, although standard ¼" unbalanced phone plugs can also be used wired, Tip = hot (+), Sleeve = ground.

Stereo 2 Track Inputs and Outputs (2TKIN / 2TK OUT)

The Stereo 2 Track Inputs and Outputs (**2TK IN** / **2TK OUT**) are wired with RCA phono plugs and 1/8" stereo jacks. RCA jacks are wired unbalanced as:

Tip = hot (+), Sleeve = ground (-).

1/8" stereo jacks are wired as:

Tip = Left, Ring = Right, Sleeve = Ground.

Headphone Outputs (PHONES)

The Headphone output is wired with both 1/8" and ¼" Tip Ring Sleeve jacks which are wired as follows:

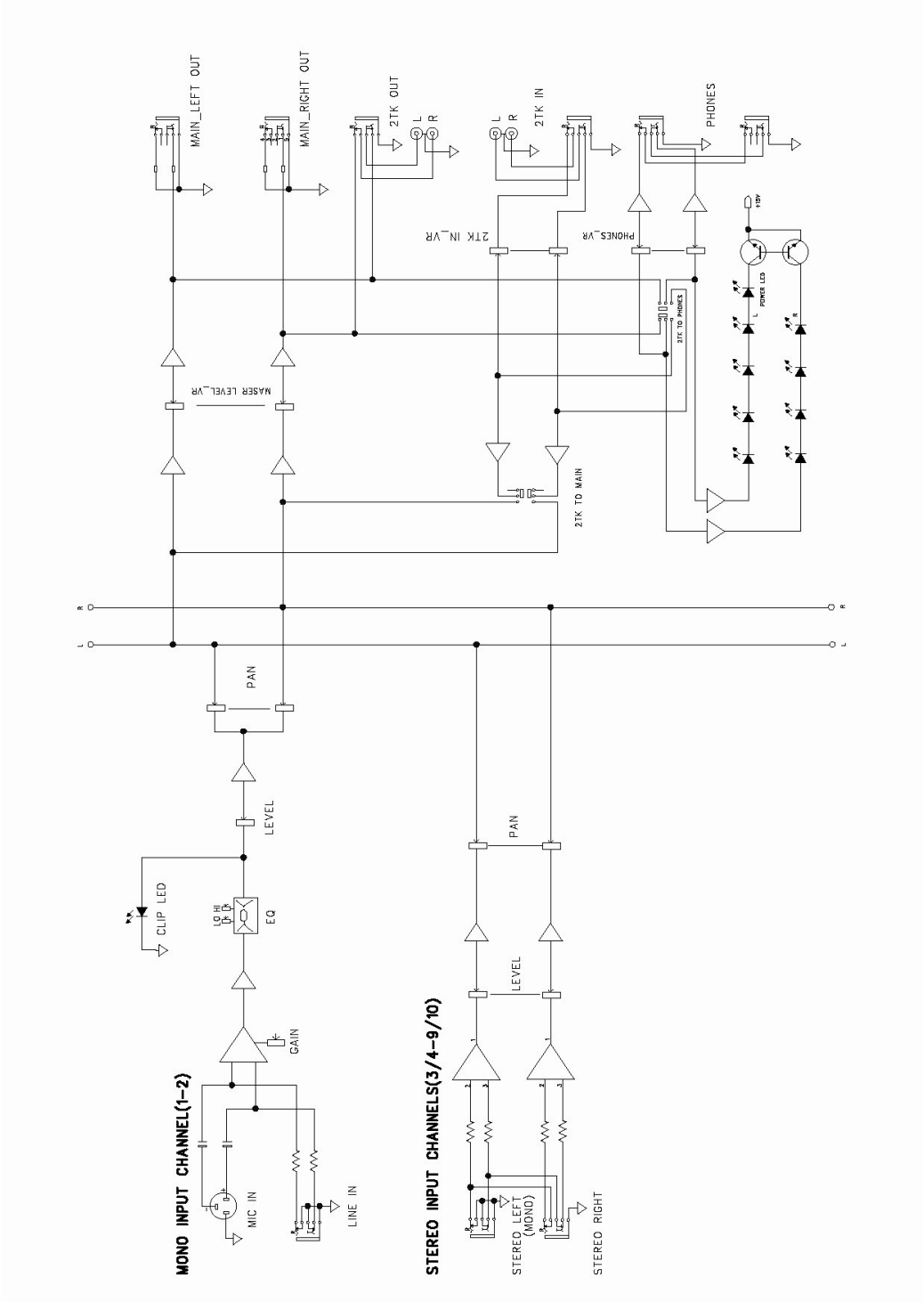
¼" - Tip = Left, Ring = Right, Sleeve = ground

SPECIFICATIONS

EZ-m mini-mixer 16X2 Specifications	
Maximum Output Level (1%T.H.D. @ 1kHz)	+22dBu over 130mw (headphone) @ 32 ohms
THD+N%	<0.01% @ +15dBu
Frequency Response	20Hz-20kHz +0/-1dB
Hum and Noise	-127dB Mic Pre Equivalent Input Noise '-90dBu Residual Noise
Maximum Input Levels	Mic In: '+10dBu Line In: '+20dBu 2TK In: '+20dBu
Mono Input Channel Gain	50dB Variable (-60~-10dB) (-40dB~+10dB)
Input Channel EQ	High (+/- 15dB) 12kHz Shelving Low (+/_15dB) 80Hz Shelving
Level Meter	4-Segment LEDx2 (output of '+4dBu = MAIN L/R
Clip Indicator	Turns on approx +16dBu
AC Power options	AC100V/120V/230V/240V, 50 Hz/60Hz
Dimensions	311mm x 77mm x2 26mm / 12.24" x 3.03" x 3.16"
Weight	1.81kg / 3.98 lbs

Details, features and specifications subject to change without notice.

BLOCK DIAGRAM



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